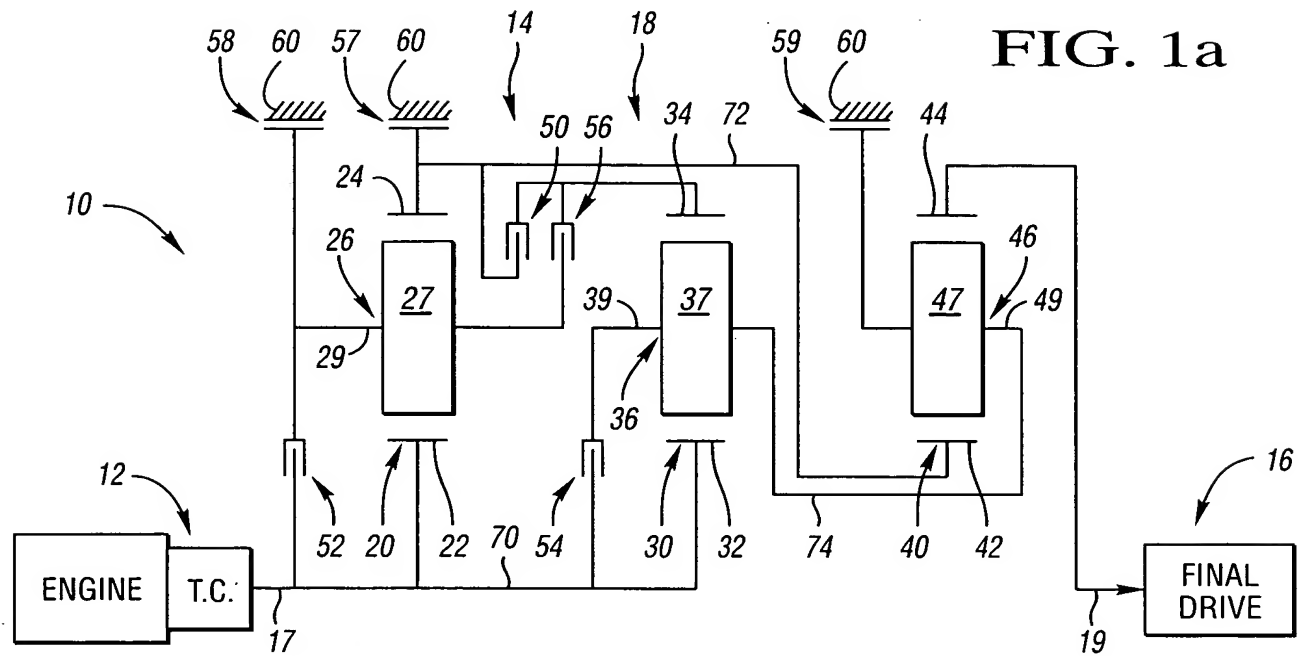


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**FIG. 1b**

	RATIOS	50	52	54	56	57	58	59
REVERSE 2	-9.20	X					X	
REVERSE 1	-3.00		X					X
NEUTRAL	0.00							X
1	9.01	X						X
2	4.53						X	X
3'	3.00	X				X		
3	2.47				X			X
4	1.80				X		X	
5	1.37				X	X		
6	1.00			X	X			
7	0.75			X		X		
8	0.64			X			X	

(X = ENGAGED CLUTCH)

TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 1.51$, $\frac{N_{R2}}{N_{S2}} = 3.00$, $\frac{N_{R3}}{N_{S3}} = 3.00$

RATIO SPREAD	14.00
RATIO STEPS	
REV2/1	-1.01
1/2	1.99
2/3	1.83
3/4	1.37
4/5	1.31
5/6	1.37
6/7	1.33
7/8	1.17

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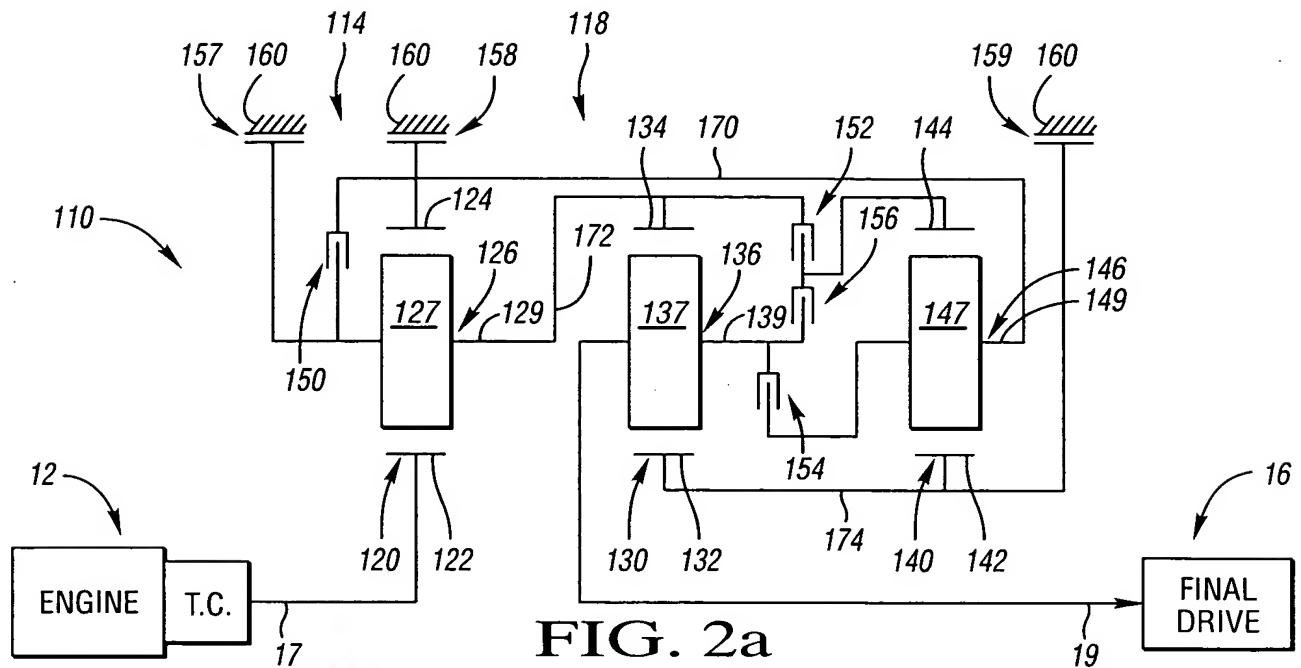


FIG. 2a

FIG. 2b

	RATIOS	150	152	154	156	157	158	159
REVERSE 3	-4.86				X	X		
REVERSE 2	-3.34		X			X		
REVERSE 1	-2.35			X		X		
NEUTRAL	0.00		X					
1	11.24		X				X	
2	6.49				X		X	
3	4.47						X	X
4	2.96				X			X
5	2.45		X					X
6	2.12			X				X
7	1.33	X						X
8	1.00	X	X					

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 2.34$, $\frac{N_{R2}}{N_{S2}} = 2.98$, $\frac{N_{R3}}{N_{S3}} = 1.80$

RATIO SPREAD	11.24
RATIO STEPS	
REV3/1	-0.43
1/2	1.73
2/3	1.45
3/4	1.51
4/5	1.21
5/6	1.16
6/7	1.59
7/8	1.33

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FIG. 3a

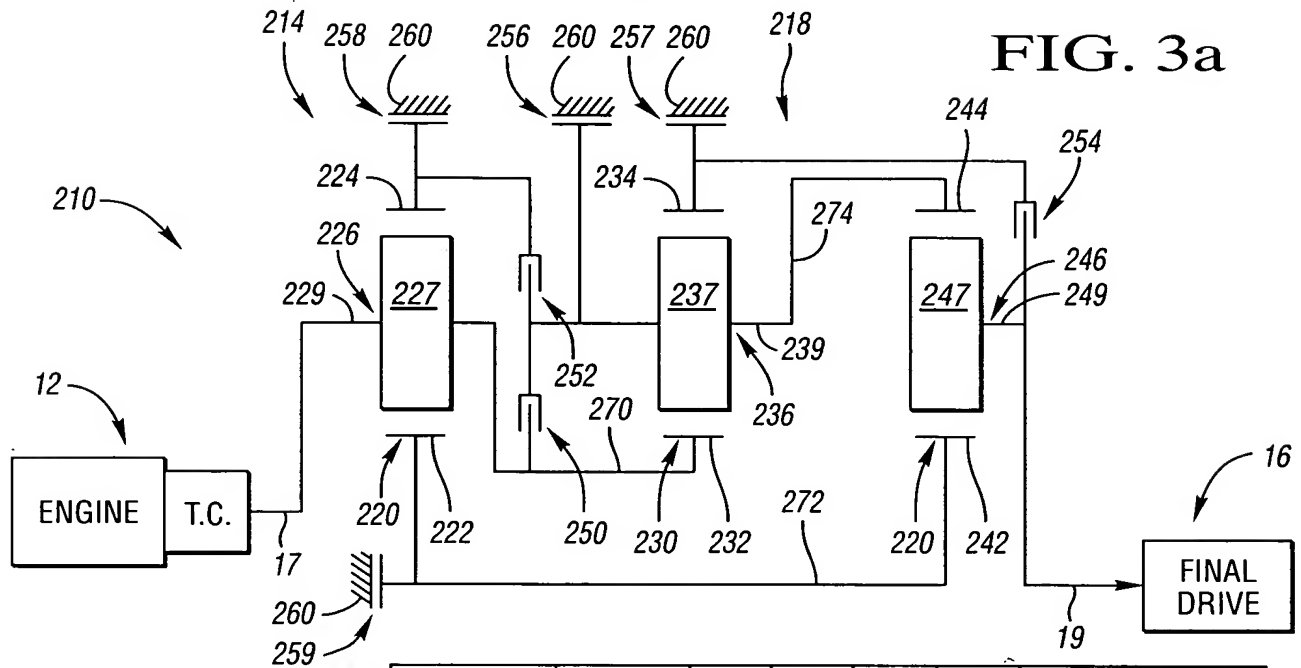


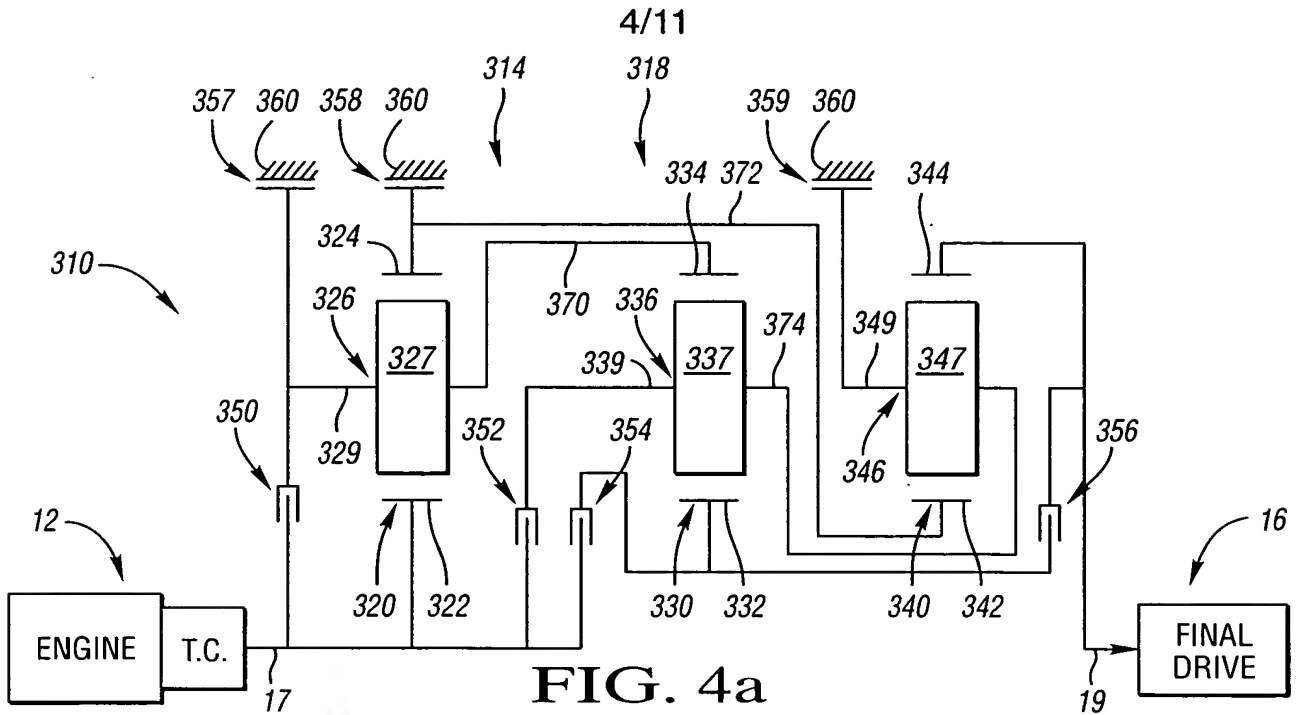
FIG. 3b

	RATIOS	250	252	254	256	257	258	259
REVERSE	-2.00			X	X			
NEUTRAL	0.00							X
1	4.56					X		X
2	2.56			X				X
3	1.52	X						X
4	1.07		X					X
5	1.00	X	X					
6	0.91		X			X		
7	0.87		X				X	
8	0.73					X	X	
9	0.55	X					X	
10	0.41			X			X	

(X = ENGAGED CLUTCH)

$$\frac{\text{RING GEAR}}{\text{SUN GEAR}} \text{ TOOTH RATIO: } \frac{N_{R1}}{N_{S1}} = 2.00, \frac{N_{R2}}{N_{S2}} = 2.34, \frac{N_{R3}}{N_{S3}} = 1.82$$

RATIO SPREAD	11.09
RATIO STEPS	
REV/1	-0.44
1/2	1.78
2/3	1.68
3/4	1.42
4/5	1.07
5/6	1.10
6/7	1.05
7/8	1.19
8/9	1.33
9/10	1.34

**FIG. 4b**

	RATIOS	350	352	354	356	357	358	359
REVERSE	-3.00	X						X
NEUTRAL	0.00							X
1	5.61					X		X
2	3.70				X			X
3	2.62				X	X		
4'	1.92		X					X
4	1.67				X		X	
5'	1.40		X			X		
5	1.23		X				X	
6	1.00		X	X				
7	0.75			X			X	
8	0.66			X		X		

(X = ENGAGED CLUTCH)

$\frac{\text{RING GEAR}}{\text{SUN GEAR}}$ TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 1.86$, $\frac{N_{R2}}{N_{S2}} = 1.50$, $\frac{N_{R3}}{N_{S3}} = 3.00$

RATIO SPREAD	8.48
RATIO STEPS	
REV/1	-0.54
1/2	1.52
2/3	1.41
3/4	1.56
4/5	1.36
5/6	1.23
6/7	1.33
7/8	1.13

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FIG. 5a

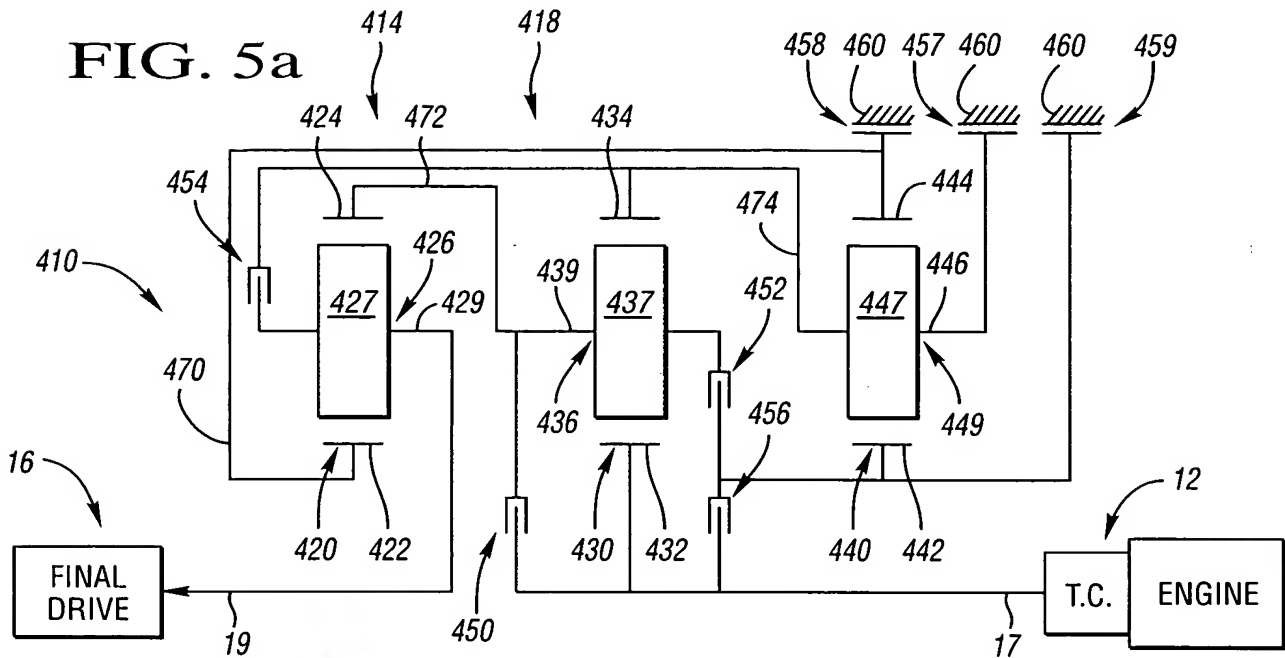


FIG. 5b

	RATIOS	450	452	454	456	457	458	459
REVERSE	-6.69		X					X
NEUTRAL	0.00					X		
1	8.09				X	X		
2	5.16		X			X		
2'	4.47					X	X	
3	3.57		X				X	
4	2.68				X		X	
5	2.12			X			X	
6	1.33	X					X	
7	1.00	X	X					
8	0.91	X						X
9	0.55			X				X

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 2.34$, $\frac{N_{R2}}{N_{S2}} = 2.99$, $\frac{N_{R3}}{N_{S3}} = 2.50$

RATIO SPREAD	14.71
RATIO STEPS	
REV/1	-0.83
1/2	1.57
2/3	1.44
3/4	1.34
4/5	1.26
5/6	1.59
6/7	1.33
7/8	1.10
8/9	1.65

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FIG. 6a

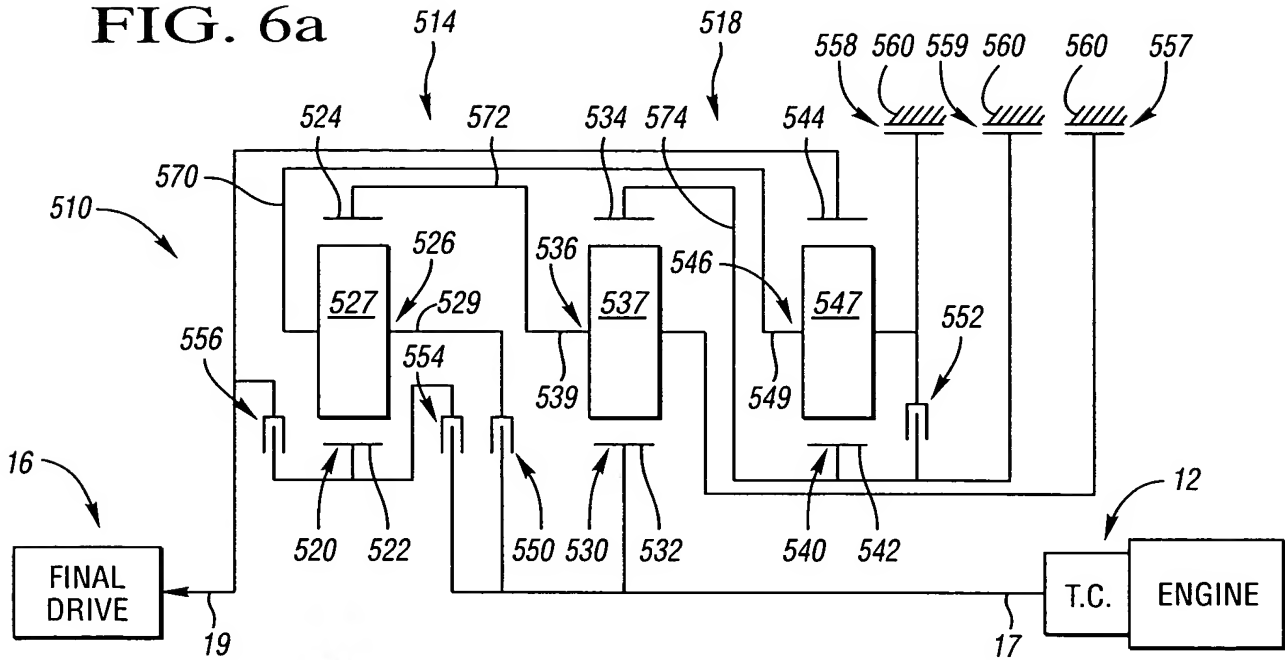


FIG. 6b

	RATIOS	550	552	554	556	557	558	559
REVERSE	-2.96		X			X		
NEUTRAL	0.00					X		
1	6.68					X	X	
2	4.03				X		X	
3	2.82				X	X		
4	1.93				X			X
4'	1.83			X			X	
5'	1.37			X		X		
5	1.26			X				X
6	1.00	X		X				
7	0.69	X						X
8	0.63	X				X		

(X = ENGAGED CLUTCH)

RING GEAR
SUN GEAR

TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 1.50$, $\frac{N_{R2}}{N_{S2}} = 2.96$, $\frac{N_{R3}}{N_{S3}} = 2.26$

RATIO SPREAD	10.64
RATIO STEPS	
REV/1	-0.44
1/2	1.66
2/3	1.43
3/4	1.46
4/5	1.54
5/6	1.25
6/7	1.44
7/8	1.10

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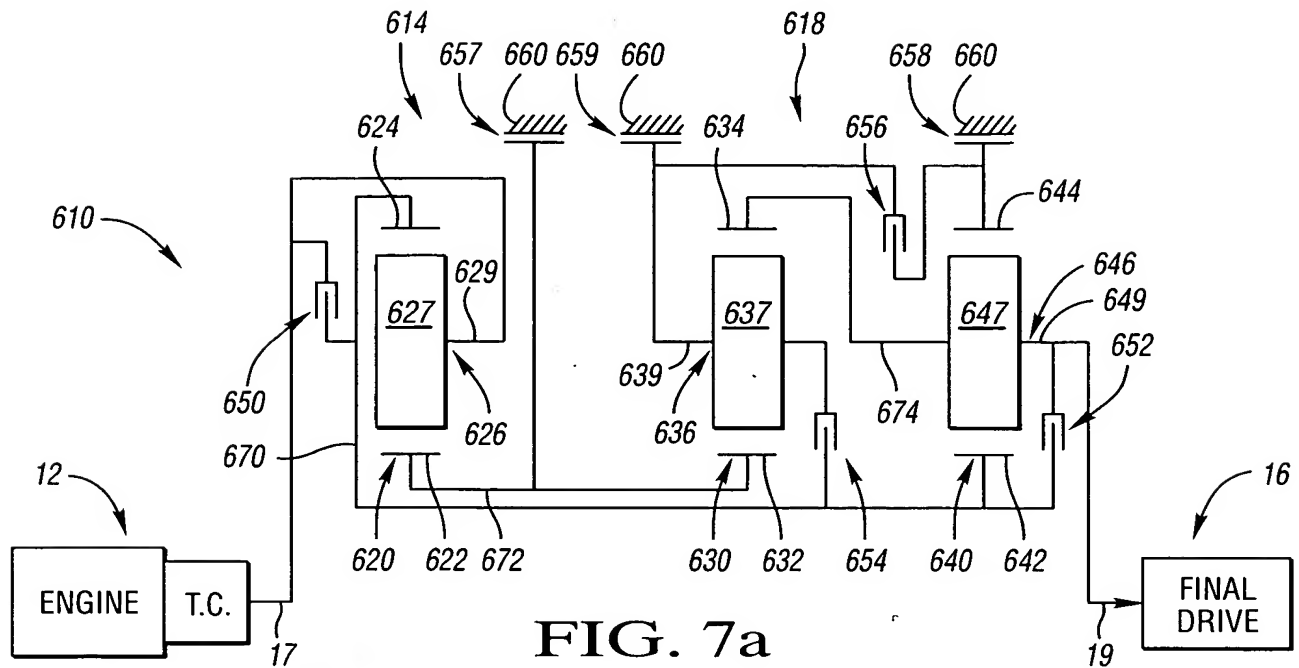


FIG. 7a

FIG. 7b

	RATIOS	650	652	654	656	657	658	659
REVERSE 3	-2.91	X						X
REVERSE 2	-0.89			X				X
REVERSE 1	-0.19		X					X
NEUTRAL	0.00						X	
1	6.66		X				X	
2	4.00	X					X	
3	2.78					X	X	
4	1.89				X		X	
5	1.23				X	X		
6	1.00		X		X			
7	0.70		X			X		
8	0.52			X		X		

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 2.28$, $\frac{N_{R2}}{N_{S2}} = 2.98$, $\frac{N_{R3}}{N_{S3}} = 2.91$

RATIO SPREAD	12.86
RATIO STEPS	
REV3/1	-0.44
1/2	1.67
2/3	1.44
3/4	1.47
4/5	1.54
5/6	1.23
6/7	1.44
7/8	1.34

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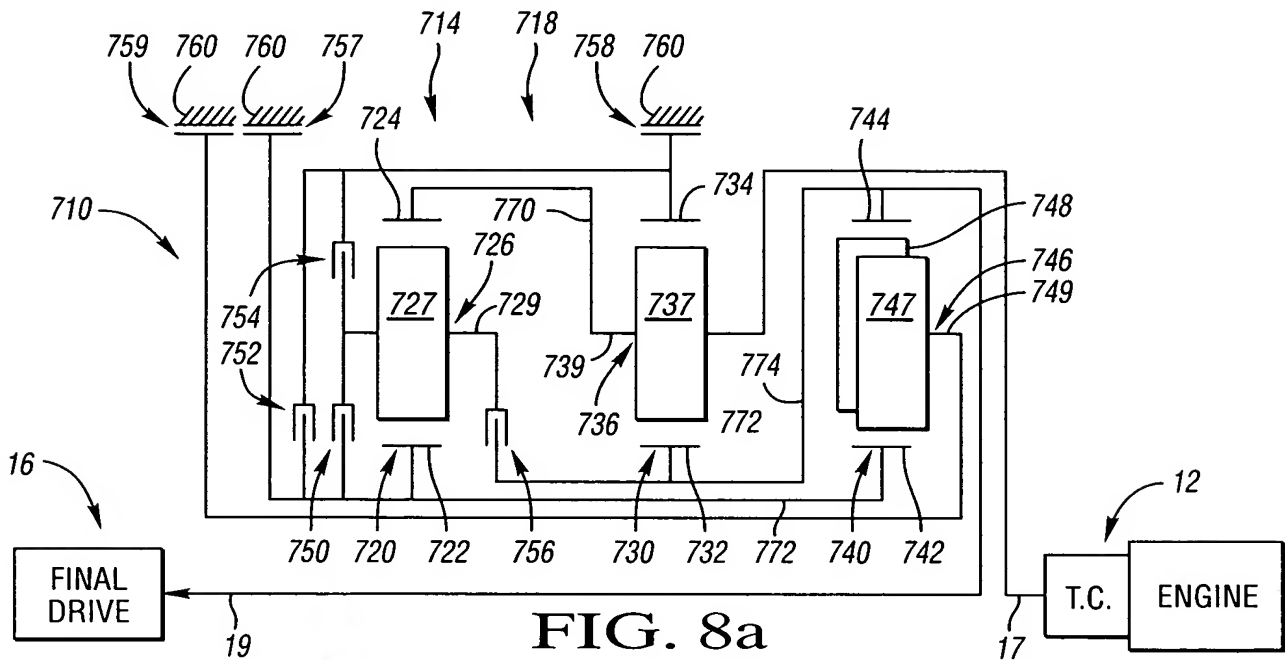


FIG. 8a

FIG. 8b

	RATIOS	750	752	754	756	757	758	759
REVERSE	-2.17				X			X
NEUTRAL	0.00							X
1	3.27	X						X
2	2.38		X					X
2'	2.13				X	X		
3	1.40			X				X
4	1.00		X	X				
5	0.83			X		X		
6	0.65			X			X	
7	0.50		X				X	
8	0.44	X					X	
9	0.27				X		X	

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 1.51$, $\frac{N_{R2}}{N_{S2}} = 1.86$, $\frac{N_{R3}}{N_{S3}} = 3.27$

RATIO SPREAD	12.11
RATIO STEPS	
REV/1	-0.66
1/2	1.54
2/3	1.53
3/4	1.40
4/5	1.21
5/6	1.26
6/7	1.30
7/8	1.15
8/9	1.63

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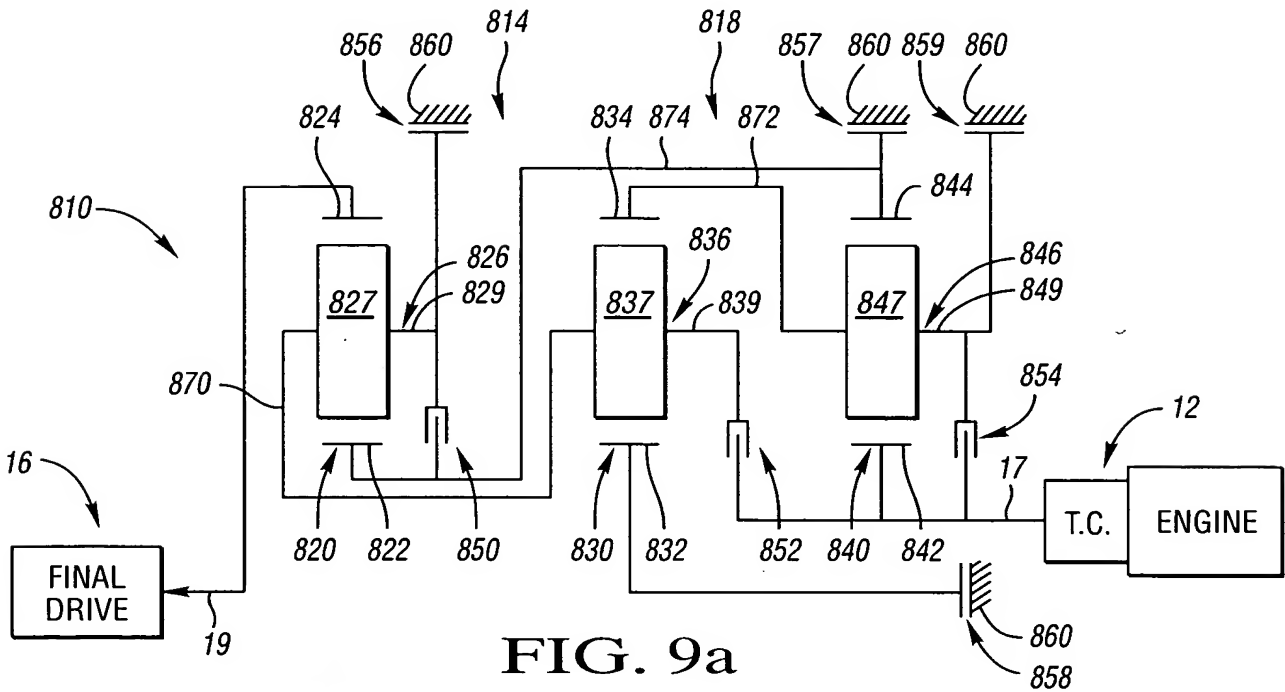


FIG. 9a

FIG. 9b

	RATIOS	850	852	854	856	857	858	859
REVERSE 2	-2.93		X		X			
REVERSE 1	-2.00			X				X
NEUTRAL	0.00				X			
1	5.86				X		X	
2	2.99					X	X	
3	2.01			X			X	
4	1.51		X				X	
5	1.21	X					X	
6	1.00	X		X				
7	0.74	X				X		
8	0.66	X						X

(X = ENGAGED CLUTCH)

$\frac{\text{RING GEAR}}{\text{SUN GEAR}}$ TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 2.92$, $\frac{N_{R2}}{N_{S2}} = 2.92$, $\frac{N_{R3}}{N_{S3}} = 2.00$

RATIO SPREAD	8.86
RATIO STEPS	
REV2/1	-0.50
1/2	1.96
2/3	1.49
3/4	1.33
4/5	1.25
5/6	1.21
6/7	1.34
7/8	1.13

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FIG. 10a

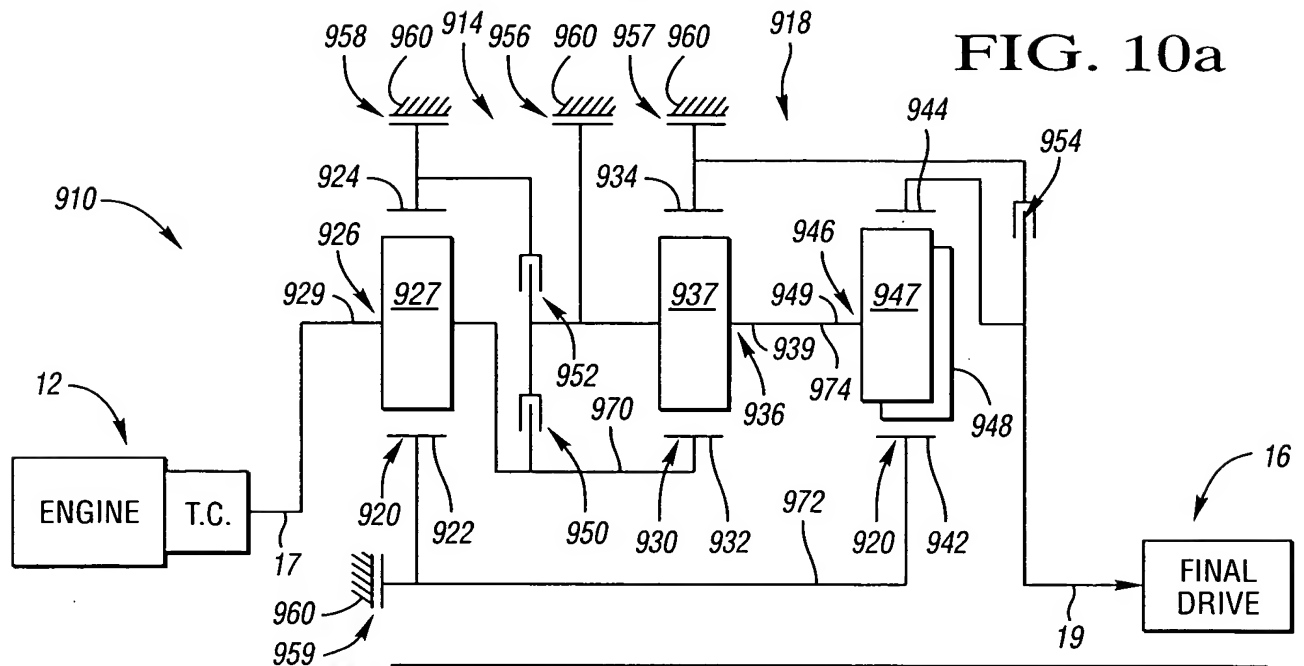


FIG. 10b

	RATIOS	950	952	954	956	957	958	959
REVERSE	-2.00			X	X			
NEUTRAL	0.00							X
1	4.56					X		X
2	2.56			X				X
3	1.52	X						X
4	1.07		X					X
5	1.00	X	X					
6	0.91		X			X		
7	0.87		X				X	
8	0.73					X	X	
9	0.55	X					X	
10	0.41			X			X	

(X = ENGAGED CLUTCH)

$$\frac{\text{RING GEAR}}{\text{SUN GEAR}} \text{ TOOTH RATIO: } \frac{N_{R1}}{N_{S1}} = 2.00, \frac{N_{R2}}{N_{S2}} = 2.34, \frac{N_{R3}}{N_{S3}} = 1.82$$

RATIO SPREAD	11.09
RATIO STEPS	
REV/1	-0.44
1/2	1.78
2/3	1.68
3/4	1.42
4/5	1.07
5/6	1.10
6/7	1.05
7/8	1.19
8/9	1.33
9/10	1.34

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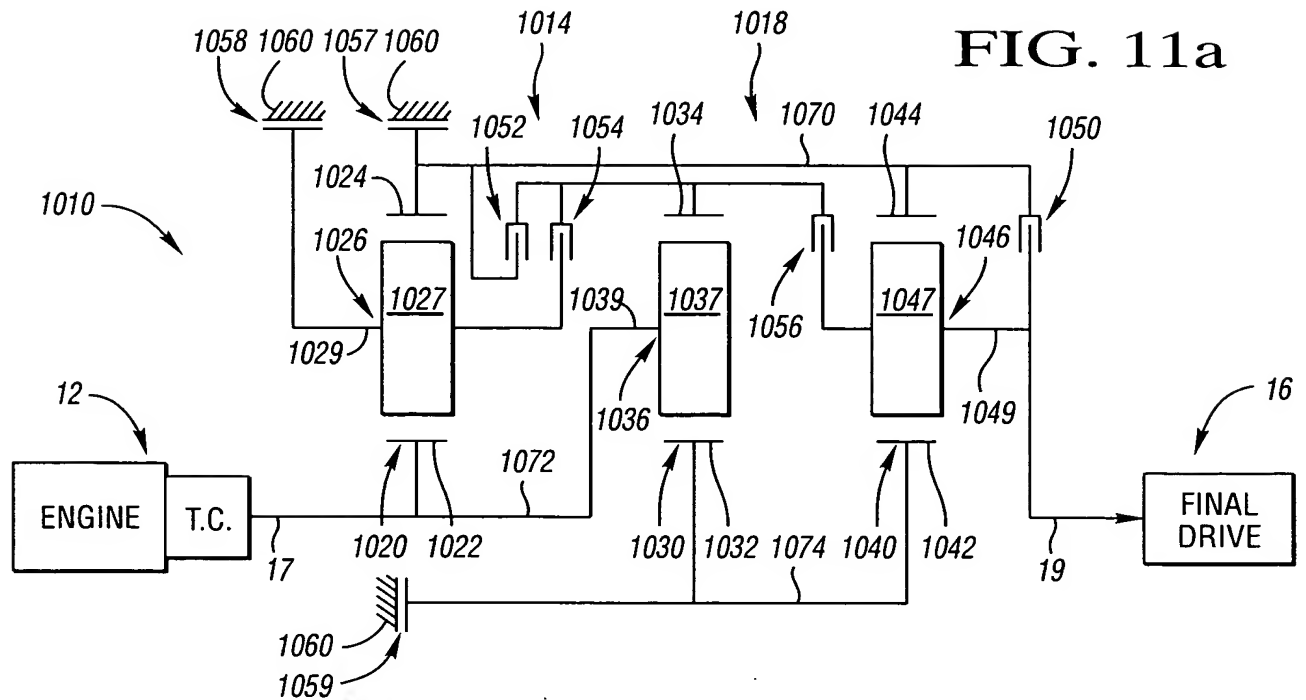


FIG. 11a

	RATIOS	1050	1052	1054	1056	1057	1058	1059
REVERSE 2	-2.18						X	X
REVERSE 1	-1.51	X					X	
NEUTRAL	0.00						X	
1	4.66				X		X	
2	3.20			X			X	
3'	1.90				X	X		
3	1.70			X		X		
4	1.30		X			X		
5	1.00		X	X				
6	0.87		X					X
7	0.68			X				X
8	0.60				X			X

(X = ENGAGED CLUTCH)

$$\frac{\text{RING GEAR}}{\text{SUN GEAR}} \text{ TOOTH RATIO: } \frac{N_{R1}}{N_{S1}} = 1.51, \frac{N_{R2}}{N_{S2}} = 2.24, \frac{N_{R3}}{N_{S3}} = 1.50$$

FIG. 11b

RATIO SPREAD	7.78
RATIO STEPS	
REV2/1	-0.47
1/2	1.46
2/3	1.88
3/4	1.31
4/5	1.30
5/6	1.15
6/7	1.28
7/8	1.14